wherein the source region forms a p-n junction in the substrate, a distance of the source p-n junction from the sidewall being approximately equal to the distance of the extension of the source contact region from the surface.

Please amend claim 3 as follows:

3. (Once Amended) The trench transistor of claim 2 wherein the degree of overlap is controlled during the manufacture of the transistor so as to provide a predetermined gate-to-source capacitance.

Please cancel claims 4-6.

Please amend claim 7 as follows.

4 7. (Once Amended) The trench transistor of claim 1 wherein both the distance of the source p-n junction from the sidewall and the distance of the extension of the source contact region from the surface is less than or equal to about 0.15 microns.

Please amend claim 9 as follows:

(o 8. (Once Amended) The trench transistor of claim 1 further comprising a heavy body, the heavy body extending into the inner corner formed by the source region and the source contact region.

Please add new claims 17-25 as follows.

17. (New) A trench transistor comprising:

a substrate;

an epitaxial semiconductor layer of a first conductivity type covering the substrate;

a semiconductor region of a second conductivity type, opposite that of the first conductivity type, covering the epitaxial layer;

at least two trenches extending from a surface of the semiconductor region, through the semiconductor region and partially into the epitaxial semiconductor layer, each trench defined by sidewalls;

a gate dielectric lining the sidewalls; and

a source region extending from the surface into the semiconductor region along the sidewalls, the source region having a tapered portion starting from a first depth

from the surface and extending toward the sidewalls to a second depth where the source region terminates.

18. (New) The trench transistor of claim 17, further comprising:

a conductive gate material partially filling the gate-dielectric-lined trenches.

19. (New) The trench transistor of claim 18, wherein a depth of the gate material, measured from the surface of the semiconductor region relative to the second depth of the source region, is controlled during the manufacture of the trench transistor so as to provide a predetermined gate-to-source capacitance.

20. (New) The trench transistor of claim 17, further comprising:

a heavy body of the second conductivity type extending into the semiconductor region between trenches, the heavy body having a doping concentration that is greater than a doping concentration of the semiconductor region.

21. (New) The trench transistor of claim 20, further comprising:

a source contact region in contact with the source region, positioned between trenches and extending less than or equal to about 0.15 microns deep from the surface into the heavy body.

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22. (New) The trench transistor of claim 21 wherein the source contact region forms an inner corner with the source region.

23. (New) The trench transistor of claim 22 wherein the heavy body extends into the inner corner.

24. (New) The trench transistor of claim 17 wherein the tapered portion has a doping concentration that is less than a doping concentration of the remaining portion of the source region along the sidewalls.

25. (New) The trench transistor of claim 17 wherein a doping concentration of the source region along sidewalls is greater than a doping concentration of the source region near the surface.

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